

REMARKS

This Application has been carefully reviewed in light of the *Office Action* sent electronically February 9, 2009. Claims 12, 14-19, 37, 39-50, and 52 are rejected in the Application. For at least the reasons discussed below, Applicants respectfully request reconsideration and favorable action in this case.

Section 103 Rejections

The Office Action rejects Claims 12-13, 15-19 and 37 under 35 U.S.C. § 103(a) as being unpatentable over Noe et al., "Comparison of Polarization Handling Methods in Coherent Optical System" ("*Noe*") in view of U.S. Patent No. 7,136,588 issued to Islam ("*Islam*"). In addition, the Office Action also rejects Claims 14, 39-50, and 52 under 35 U.S.C. § 103(a) as being unpatentable over *Noe* in view of *Islam* and further in view of the article "Progress Towards the Field Deployment of Coherent Optical Fiber Systems," to Brain et al. ("*Brain*").

Independent Claim 12 of the present application, as amended, recites the following limitations:

A method for receiving a signal, comprising:
generating a polarized local signal based on receiver-side feedback;
receiving an ingress traffic signal comprising a first signal and a second signal, the first and second signals having the same wavelength, having different polarizations, and being modulated based on different data;
combining the ingress traffic signal including the first signal and the second signal with the polarized local signal to generate a combined signal;
splitting the combined signal into a first split signal and second split signal using a polarization beam splitter;
detecting the first split signal;
detecting the second split signal; and
converting the detected first split signal and second split signal into intended data streams.

Independent Claims 37 and 52 recite similar, although not identical, limitations.

Applicants have amended Claim 12 to recite that the received ingress traffic signal comprises “a first signal and a second signal, the first and second signals having the same wavelength, having different polarizations, and being modulated based on different data” and “converting the detected first split signal and second split signal into intended data streams.” Neither *Noe* or *Islam* recites these limitations. For example, *Noe* discloses (see Figure 9) that two optical signals having different wavelengths are transmitted by transmitters TX1 and TX2. The two optical signals are combined at a coupler and one of the two signals is then selected (see p. 1359, Section B).

For at least this reason, Applicants respectfully request reconsideration and allowance of Claim 12, as well as the claims that depend from Claim 12. In addition, independent Claims 37 and 52 include similar, although not identical limitations, and are allowable for similar reasons. Thus, Applicants also respectfully request reconsideration and allowance of Claims 37 and 52, as well as the claims that depend from Claims 37 and 52.

New Claims

Applicants have added new Claims 55-57. These claims recite certain limitations removed from independent Claims 12, 37, and 52 in the present Response. For example, Claim 55 recites that the method of Claim 12 further comprises “compensating the ingress traffic signal for polarization mode dispersion.” Claims 56 and 57 add similar limitations to independent Claims 37 and 52.

In the Office Action, the Examiner indicates that such a limitation is inherent in a polarization diversity receiver. However, in responding to the Applicants argument that this limitation is not disclosed in *Noe*, the BPAI stated during the previous appeal in this application that they “do not necessarily disagree with Appellants that the polarization diversity receiver system of *Noe* performs differently than the system disclosed by Appellants, it is the claimed invention that is before us on appeal.” The BPAI thus found that the appealed independent claims did not explicitly require PMD compensation of an ingress signal before such a signal is combined with a locally-generated signal. However, Claims 55-57 correct this previous deficiency and explicitly require compensation for polarization

mode dispersion. *Noe* does not disclose such a limitation and, as implied by the BPAI, the teaching of such polarization mode dispersion compensation is not inherent in *Noe*.

When relying upon the theory of inherency, the M.P.E.P. requires that an Examiner provide a basis in fact and/or technical reasoning to support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. Appellants respectfully submit that the Examiner has not met this requirement and that such a requirement cannot be met in this case. Nothing in Figures 10-13 of *Noe* indicates or implies that the ingress signal is compensated for polarization mode dispersion. Furthermore, Appellants respectfully submit that a polarization mode dispersion compensating device (for example, a device before the PMC that compensates the ingress signal for PMD) is not shown in Figure 9 of *Noe*, which shows the details of the experimental communication system setup discussed in the paper.

For this reason, in addition to their dependence on an allowable independent claim, Applicants respectfully request allowance of Claims 55-57.

CONCLUSION

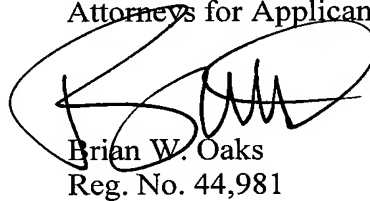
Applicants have made an earnest attempt to place this case in condition for allowance. For at least the foregoing reasons, Applicants respectfully request full allowance of all the pending claims.

If the Examiner feels that a telephone conference would advance prosecution of this Application in any manner, the Examiner is invited to contact Brian W. Oaks, Attorney for Applicants, at the Examiner's convenience at (214) 953-6986.

Although Applicants believe no fees are due, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

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